

ABSTRACT OF THE DISCLOSURE

An interferential position measuring arrangement including a light source connected to a first object, which emits a beam of rays in a direction of an optical axis and an optical element arranged downstream of the light source, which converts the beam of rays emitted by the light source into an incoming beam of rays. A scale grating connected to a second object that moves relative to the first object, which splits the incoming beam of rays into a first partial beam of rays, which is propagated into a first spatial direction and a second partial beam of rays, which is propagated into a second spatial direction. A first scanning grating that causes splitting of the first partial beam of rays into third and fourth partial beams of rays and a second scanning grating that causes splitting of the second partial beam of rays into fifth and sixth partial beams of rays, wherein at least two of the third, fourth, fifth and sixth partial beams of rays meet again, and a periodically modulated interferential fringe pattern with a definite spatial interferential fringe pattern period results in a detection plane. A detection arrangement arranged in the detection plane, which causes splitting of light entering through the detection arrangement into at least three different spatial directions and optoelectronic detector elements arranged in the at least three spatial directions for detecting phase-shifted scanning signal.